

## Appendix I: List of Data Sources

*Discharge Abstract Database (DAD)* captures administrative, clinical, and demographic information on hospital separations in Ontario. The sensitivity for capturing major surgical procedures ranges from 70-94%, and the specificity is over 99%.

*National Ambulatory Care Reporting System (NACRS)* is a population-based administrative database that contains data for all hospital-based and community-based ambulatory care, including day surgery, outpatient clinics and emergency departments. The *Same Day Surgery (SDS)* database collects information about same-day surgeries and procedures in the Province of Ontario. Each record corresponds to a single encounter, and the information available is similar to that for the DAD.

*The Ontario Health Insurance Plan (OHIP)* database contains all claims made by physicians and other healthcare providers for insured services provided to Ontario residents. Approximately 95% of Ontario physicians are paid fee-for-service and submit claims to OHIP for reimbursement. Each record in the database represents a discrete service rendered to a specific person on a particular day. The information in the record includes the type of service provided, diagnosis information, provider, the person who received the service, date of service, referring provider (for consultations), and payment information. A three-digit version of ICD-9 is used for diagnoses; one diagnosis is provided per encounter.

The *Registered Persons Database (RPDB)* contains demographic information and an encrypted, unique numeric identifier—the ICES key number or IKN—based on the Ontario Health Card Number (HCN) that links persons across all provincial health databases. The *Health Care Institutions Database (INST)* provides information on hospitals and other healthcare facilities. *Canadian census data* provide information on how many residents in a census dissemination area self-identify as a visible minority or have recently immigrated to Canada in the prior five years. The *Ontario Marginalization Index (ONMARG)* uses four dimensions based on census data—residential instability, material deprivation, ethnic concentration, and dependency—to assess socioeconomic vulnerability based on the location of residence; these are ecologic variables associated with many health outcomes.

*Wait Time Information System (WTIS)* collects prospective wait time data for various scheduled clinical services in Ontario. It currently includes demographic information—including the HCN, allowing linkage to other Ontario administrative health data—as well as information on Wait 1 (time from receipt of referral to first specialist visit), priority categorization (1 to 4), referral source, Dates Affecting Readiness to Consult (DARC) and reasons, system delay reasons, Wait 2 (time from the decision to treat to the procedure), Dates Affecting Readiness to Treat (DART), and explanations. The WTIS includes 122 total data fields and 58 data elements.

Data are entered into the WTIS online web browser through manual submission or electronically using Health Level-7 (HL7) interface messaging. Surgeons' offices usually provide data, although some facilities coordinate waitlist entry submission through OR booking resources. Waitlist entries for patients are opened within 48 hours of the decision to treat and closed within 48 hours of the

procedure date. Data collection began in limited form in 2006, with a group of Wait 2 data for oncology surgery, cataract surgery, hip and knee replacement surgery, and MRI/CT scans. In 2009, Wait 2 data collection expanded to additional surgical procedures: General Surgery, Gynecology Surgery, Neurosurgery, all Ophthalmology Surgery, Oral/Maxillofacial Surgery & Dentistry, Oncology Surgery, all Orthopedic Surgery, Otolaryngology Surgery, Plastic and Reconstructive Surgery, Thoracic Surgery, Urology Surgery, Vascular Surgery. In 2012, the collection expanded to include “System Delay” information and Wait 1 data for surgical procedures. The WTIS is managed by Ontario Health’s Access-To-Care Program, which now measures surgical wait times for 665,000 surgeries each year in over 200 procedure categories from over 3,200 clinicians at 91 facilities.